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TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATASE ISOMERASE AND THEIR
PARTICIPATION IN AUTOIMMUNE DISEASE
INVENTORS NAME: Henrik Ditzel et al.
SERIAL NO.: 09/828,708

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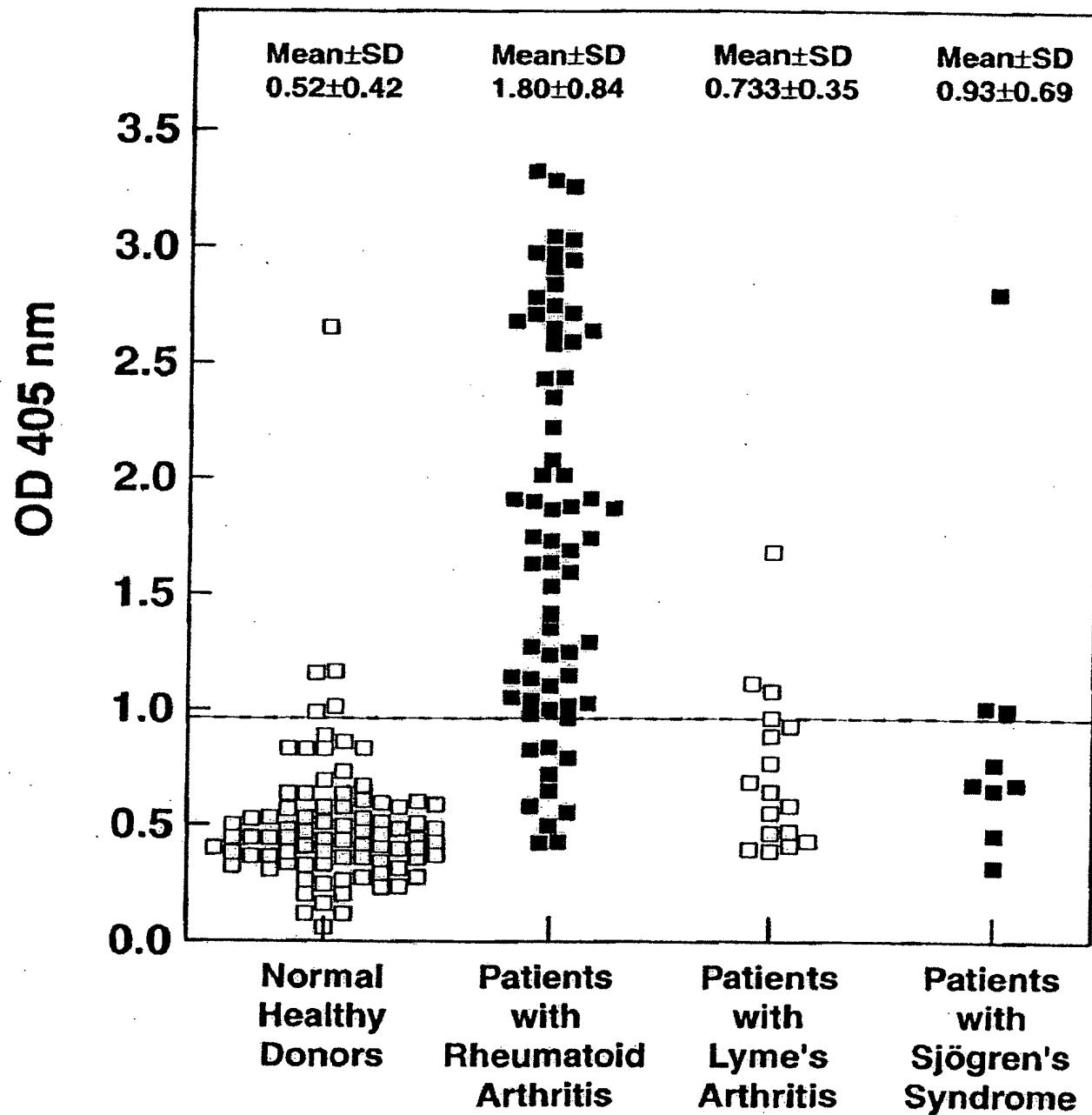


FIG. 1A

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR
PARTICIPATION IN AUTOIMMUNE DISEASE
INVENTORS NAME: Henrik Ditzel et al.
SERIAL NO.: 09/828,708
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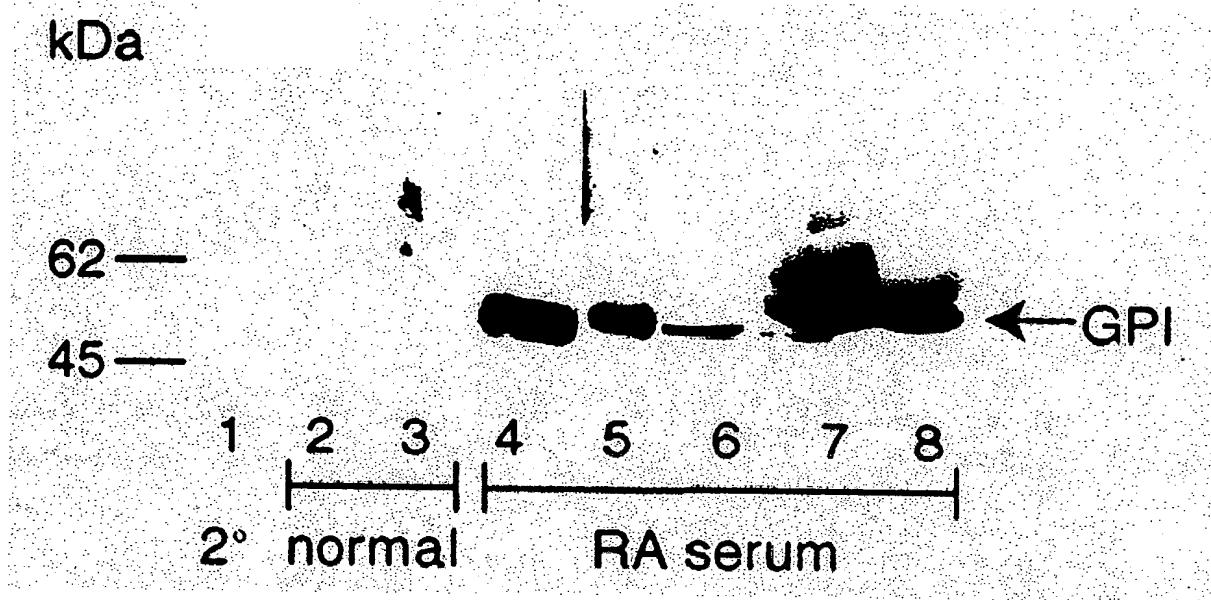


FIG. 1B

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR
PARTICIPATION IN AUTOIMMUNE DISEASE
INVENTORS NAME: Henrik Ditzel et al.
SERIAL NO.: 09/828,708

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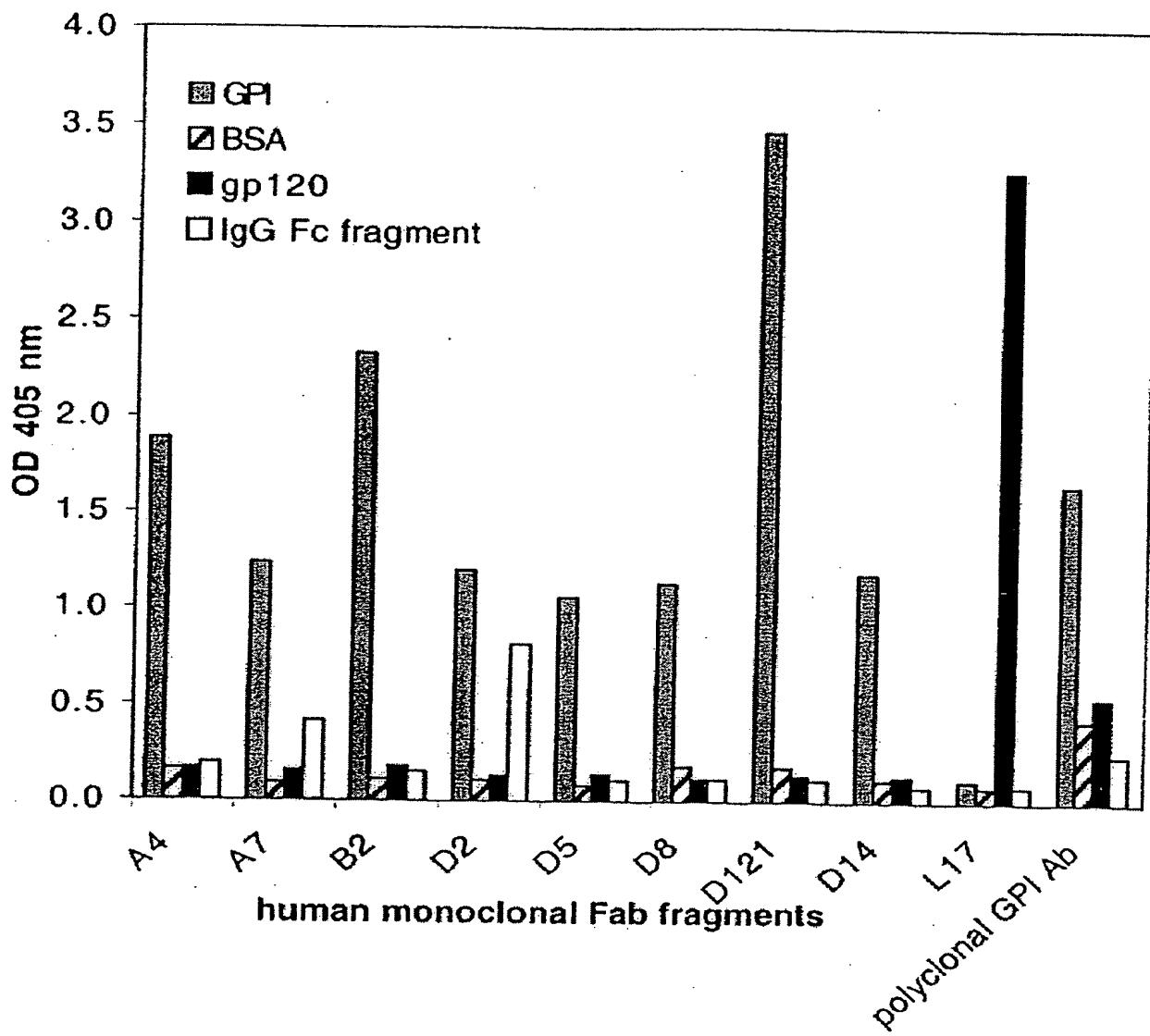


FIG. 2

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR
 PARTICIPATION IN AUTOIMMUNE DISEASE
 INVENTORS NAME: Henrik Ditzel et al.
 SERIAL NO.: 09/828,708

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Light Chain Variable AA Sequences

Name	SEQ ID NO:	FR1	CDR1	FR2
A4	1	PDSLAVSLGERATINC	KSSQS VFTYTSNNKNYLA	WYQQKPGQPPKLLIY
D2	2	PSFLSASVQDRVTTTC	RASQG ISSYLA	WYQLKPGKAPKLLIY
D121	3	PGT LSLSPGERATLSC	RASQS VSSSYLA	WYQQKPGQAPRLLIY
B2	4	PDSLAVSLGERATINC	KSSQS VFTYTSNNKNYLA	WYQQKPGQPPKLLIY
D14	5	PGT LSLSPGEGATLSC	RASQS VSSSYLA	WYQQRPGQAPRLLIY
D5	6	PGT LSLSPGEGATLSC	RASQS VSSSYLA	WYQQKPGQAPRLLIY
A7	7	PGT LSLSPGERVTLSC	RASQS VSSSYLA	WYQQKPGQAPRLLIY
Name		CDR2	FR3	CDR3
cont'd				FR4
A4	WASTRES	GVPDRFSGSGSGTDFITLTISLQAEDVA VYYC	QQYYDSYT	FGQGTKLEIKRTVA
D2	AASTLQS	GVP SRFSGSGSGT EFTLTISLQ P EDFATYYC	QQLNSYPLT	FGGGAKVGI RRTVA
D121	GASSRAT	GIPDRFSGSGSGTDFITLTISRLEPEDFA VYYC	QQYGS S PRT	FGQGTKVEIKRTVA
B2	WASTRES	GVPDRFSGSGSGTDFITLTISLQAEDVA VYYC	QQYYDSYT	FGQGTKLEIKRTVA
D14	GASSRAT	GIPDRFSGSGSGTDFITLTISRLEPEDFA VYYC	QQYDNVPDT	FGQGTRLEIKRTVA
D5	GASSRAT	GIPDRFSGSGSGTDFITLTISRLEPEDFA VYYC	QQYGT SPL	FGQGTRLEIKRTVA
A7	GASSRAT	GIPDRFSGSGSGTDFITLTISRLEPEDFA VYYC	QQYGS S PRT	FGQGTKVEIKRTVA

FIG. 3AL

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE SOMERASE AND THEIR
 PARTICIPATION IN AUTOIMMUNE DISEASE
 INVENTORS NAME: Henrik Ditzel et al.
 SERIAL NO.: 09/828,708

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Heavy Chain Variable AA Sequences

Name	SEQ ID NO.	FR1	CDR1	FR2	CDR2
A4	8	GGGVQPGRSSKLSCAASGFTFS	SHGSH	WVRQAPGKGLEWVA	LLSSDGSNKFYIESVKKG
D2	9	.....AW...LR...V.....	.....TM.	.....	..TM.
D121	10	.....R.....R.....	....YTF.	.....	VI.Y..NK.Y.AD....
B2	11	GAEVRKPGTSVRISCRASGNTFT	GHHIH	WVRQAPGQGLQWMG	RINPTGGVSLAQSFQD
D14	12	GGGLVQPGGSLRLSCATSGFIFN	SYAMN	WVRQAPGKGLEWVS	RISGNSGSTFYADSVKG
D5	13	GPGLVRPSQTLISLTCVPSPGSIK	GDSYFWS	WVRQAPVGKGLEWIG	RIYGRGTTNNYNRVFGS
A7	14	GAEVKKPSSVVKVSCRASGGTFS	RYAIS	WVRQAPGQGLEWMG	GIIPPFGPVNYYAQKFQG
Name	cont'd	FR3	CDR3	FR4	VH gene
A4		RFTISKDNISKNTLYLQMNSLRIDDTAVYYCAI	SLVGTAFNY	WGQGTIVTVSS	VH3
D2		.....R.....LS...PE.....TN	E..A...D.	.....	VH3
D121		.....V.....VE.....	.....I.....	.....	VH3
B2		RVSLTRDRSSNTVFILELSGLTEEDTALYFCAR	PRFNMIREPLDL	WGQGTIVTVSS	VH1
D14		RFTISRDNSKNTAFLRMNSQRAEDTAVYYCAR	DLSSGAYYYYGMDV	WGQGTIVTVSS	VH3
D5		RVSMSVDMRSQQFFLELRDVTAADTAVYYCAR	DKGSEYSYFDP	WGQGIVVNVFS	VH4
A7		RVTITADDSTNTAYMGLSSLRSGDTAVYYCAR	VAYDGSGYNNIPK1YYYSYMD	WGKGTTTVSS	VH1
			V		

FIG. 3AH

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR
PARTICIPATION IN AUTOIMMUNE DISEASE

INVENTORS NAME: Henrik Ditzel et al.

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Name	SEQ ID NO:	FR1	CDR1	FR2	CDR2
A4	8	GGGVQPGRSLLKISCAASGGTFS	SHGSH	WVRQAPGKGLEWVA	LLSSDGSNKFYIESVKG
D2	9	.....AW..LR..V.....	..TM.	..	..TM.
D121	10	.....R.....	..YTF.	..	VI.Y..NK.Y.AD...
DP-46		.....R.....	..YAM.	..	VI.Y.....AD...
B2	11	GAEVRKPGTSVRISCRASGNTFT	GHHIH	WVRQAPGQGLQWMG	RINPTGGGVSLAQSFQD
DP-7		...K..A..KV..K..Y...	SYPMH	.....E..	I..S..ST.Y..K..G
D14	12	GGGLVQPGGSLRLSCATSGFIFN	SYAMN	WVRQAPGKGLEWVS	RISGNSGSTFYADSVKG
VH26		.....A..T.S	...S	..	A...SG...Y.....
D5	13	GPGLVVRPSQTLSSLTCPVSPGSIK	GDSYFWS	WVRQPVGKGLEWIG	RIYGRGTTNYNRVFGS
IGHCAK		.....K.....T..G..S	SG..Y..	.I...A..	...TS.S....PSLK.
A7	14	GAEVKKPQSSVVKVSCRASGGTFS	RYAIS	WVRQAPGQGLEWIG	GIIPPFGPVNYAQKFGQG
VH1-69		.....K.....	S...	..	...I..TA.....

FIG. 3B

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR
 PARTICIPATION IN AUTOIMMUNE DISEASE
 INVENTORS NAME: Henrik Ditzel et al.
 SERIAL NO.: 09/828,708

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Name cont'd	FR3	FR4	VH gene
A4	RFTISKDNSKNTLYLQMNNSLRIDDTAVYYCAI	SLVGTIAFNY	VH3
D2	.....R.....Ls.....PE.....TN	.....E.....D.	VH3
D121	.....T.....VE.....	.....I.....	VH3
DP-46	.....R.....AE.....R	.....
B2	RVSLLTRDRSSNTVFILESGLTEEDDTALYFCAR	PRFMIREPLDL	VH1
DP-7	.....TM.....T.TS.....YM.....S.RS.....V.Y....	.....
D14	RFTISRDNSKNTAFLRMNSQRAEDDTAVYYCAK	DLSGGAYYYGM	VH3
VH26	.....LY.Q.....L.....	DV	
D5	RVSMSVDMRSQQFFLELRDVTAAADTAVYYCAI	DKGSEYSYFDP	VH4
IGHCAK	.....TI.....T.KN.....S.K.SS.....	.....
A7	RVTITADDSTNTAYMGLSSLRSGDTAVYYCAI	VAYDGSGYNNI	VH1
VH1-69	.....K.....S.....E.....	PKIYYYSYMDV	

FIG. 3B Cont'd

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHAT ISOMERASE AND THEIR
 PARTICIPATION IN AUTOIMMUNE DISEASE
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Clone	Closest Germline	% amino acid homology	% nucleotide homology	R/S ratio
				CDRs
A4	DP-46	86	89	12/5:2.4
D2	DP-46	87	92	4/5:0.8
D121	DP-46	91	95	7/0:>7.0
B2	DP-7	67	79	2/4:0.5
D14	VH26	87	93	20/17:1.2
D5	IGHCAK	73	81	7/3:2.3
A7	VH1-69	90	94	17/16:1.1
				5/2:2.5
				14/5:2.8
				13/4:3.3
				5/0:>5.0
				7/2:3.5

FIG. 3C

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR PARTICIPATION IN AUTOIMMUNE DISEASE

INVENTORS NAME: Henrik Ditzel et al.

SERIAL NO.: 09/828,708

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CDR's Heavy Chain

SEQ ID NO:	CDR1	SEQ ID NO:	CDR2	SEQ ID NO:	CDR3
15 SHGSH	22	LLSSDGSNKFYIESVKG	29	SLVGTIAFNY	
16 . TM.	23	.IFY. . . Y. AD. . .	30	.E. A. . . D.	
17 . YTF.	24	VI. Y. . NK. Y. AD. . .	31	.I.	
18 GHITH	25	RINPTGGVSLAQSFDQ	32	PRFMIREPLDL	
19 SYAMN	26	RISGNSGSTFYADSVKG	33	DLSSGAYYYGMDV	
20 GDSYFWS	27	RIYGRGTTNYNRFVFGS	34	DKGSESYFDP	
21 RYALIS	28	GIIPPFGPVNYAQKFQG	35	VAYDGGYNNIPKIYYYSYMDV	
SEQ ID NO:	CDR1	SEQ ID NO:	CDR2	SEQ ID NO:	CDR3
36 KSSQSIVFYTSNNKNYLA	43	WASTRES	50	QQYYDSYT	
37 RASQGIISSYLA	44	AASTLQS	51	QQINSYPLT	
38 RASQSVSSSYLA	45	GASSRAT	52	QQYGSSPRT	
39 KSSQSIVFYTSNNKNYLA	46	WASTRES	53	QQYYDSYT	
40 RASQSVSSSYLA	47	GASSRAT	54	QQYDNVPDT	
41 RASQSVSSSYLA	48	GASSRAT	55	QQYGTSPPL	
42 RASQSVSSSYLA	49	GASSRAT	56	QQYGSSPRT	

FIG. 4A

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATASE SOMERASE AND THEIR
PARTICIPATION IN AUTOIMMUNE DISEASE
INVENTORS NAME: Henrik Ditzel et al.
SERIAL NO.: 09/828,708

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Framework Regions, Heavy Chain

SEQ ID	FR1	SEQ ID	FR2	SEQ ID	FR3	SEQ ID	FR4
NO:	NO:	NO:	NO:	NO:	NO:	NO:	NO:
57	GGGVVQPGRSLLKLSCAAASGFTFS	64	WVRQAPGKGLEWVA	69	RFTISKDNSKNTLYLQMNSLRIDDTAVYYCAI	76	WGQGTTIVTVSS
58	.....AW.....LR.....V.....	64	.....	70	.....R.....LS.....PE.....TN	76	.....
59	.....	64	.....	71	.....	76	.....
					.....VE.....		
60	GAEVRKPGTTSVRISCRASGNTIFT	65	WVRQAPGQGLQWMG	72	RVSLTRDRSSNTVFILELSGLTEEDTALYFCAR	77	WGQGTVTVTVSS
61	GGGLVQPGGSLRLSCATSGFIFN	66	WVRQAPGKGLEWVS	73	RFTISRDNSKNTAFLRNNSQRAEDTAVYYCAK	78	WGQGTTTVTVSS
62	GPGLVVRPSQTLSSLTCPVSPGSIK	67	WVRQPVGKGLEWIG	74	RVSMSVDMRSQFFLEILRDVTFADTAVYYCAR	79	WGQGIVVNVFS
63	GAEVKKPGSSVKVSCRASGGTFS	68	WVRQAPGQGLEWMG	75	RVTITADDSTNTAYMGLSSLRGDTAVYYCAR	80	WGKGTTVTVTVSS

FIG. 4B

TITLE: AUTOANT DIES TO GLUCOSE-6-PHOSPHAT, SOMERASE AND THEIR
 PARTICIPATION IN AUTOIMMUNE DISEASE
 INVENTORS NAME: Henrik Ditzel et al.
 SERIAL NO.: 09/828,708

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Framework Regions, Light Chain

SEQ ID NO:	FR1	SEQ ID NO:	FR2
81	PDSLAVSLGERATINC	88	WYQQKPGQPPKLLIY
82	PSFLSASVVGDRVTTTC	89	WYQLKPGKAPKLLIY
83	PGTLSSLSPGERATLSC	90	WYQQKPGQAPRLLIY
84	PDSLAVSLGERATINC	91	WYQQKPGQPPKLLIY
85	PGTLSSLSPGEGATLSC	92	WYQQRPGQAPRLLIY
86	PGTLSSLSPGEGATLSC	93	WYQQKPGQAPRLLIY
87	PGTLSSLSPGERVTLSC	94	WYQQKPGQAPRLLIY
SEQ ID NO:	FR3	SEQ ID NO:	FR4
95	GVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC	102	FGQGTTKLEIKRTVA
96	GVPDRFSGSGSGTDFTLTISSLQPEDFATYYC	103	FGGGAKVVGIRRTVA
97	GIPDRFSGSGSGTDFTLTISSLQPEDFAVYYC	104	FGQGTTKVEIKRTVA
98	GVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC	105	FGQGTTKLEIKRTVA
99	GIPDRFSGSGSGTDFSLTISSLQPEDTGTYYC	106	FGQGTRLEIKRTVA
100	GIPDRFSGSGSGTDFTLTISSLQPEDFAVYYC	107	FGQGTRLEIKRTVA
101	GIPDRFSGSGSGTDFTLTISSLQPEDFAVYYC	108	FGQGTTKVEIKRTVA

FIG. 4B Cont'd

TITLE: AUTOANTI. DIES TO GLUCOSE-6-PHOSPHATE SOMERASE AND THEIR
PARTICIPATION IN AUTOIMMUNE DISEASE

INVENTORS NAME: Henrik Ditzel et al.

SERIAL NO.: 09/828,708

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LIGHT CHAIN NUCLEOTIDE SEQUENCE OF ANTI-GPI ANTIBODIES

A4 - SEQ ID NO:112

CCAGACTCCCTGGCTGTCTCTGGCGAGAGGGCCACCATCAACTGCAAAGTCCAGGCCAAGTGTCTTACACTTCCAACAATAA
GAACTACTTAGCTTGGTACCCAGCAGAAACCAGGCCAGCCTCTTAAGTTGCTCATTTACTGGGCATCACCACCCGGAAATCCGGGGTCC
CTGACCCGATTTCAGTGGCAGGGGGCTGGGACAGATTTCACCTCTCACCATCAGCAGGCCCTGCAAGGCTGAAGATGTGGCAGTTATAC
TGTCAAGCAATATTATGATTGATTCGTACACTTTGCCAGGGACCAAGCTGGAGATCAAACGAACACTGTGGCT

D2 - SEQ ID NO:113

CCATCCCTCTGTGCATCTGTAGGAGACAGACTCACCTGCCCCCAGTCAAGGGCATTAGCAGTTATTAGCCTGGTAT
CAGCTAAACCGGGAAAGCCCTTAAGCTCTGTGATCTATGCTGCATCCACTTGCAGAAAGTGGGTCAGGGCAG
TGATCTGGGACAGAAATTCAACTCTCACAAATAAGCAGCCCTGCAAGATTITGCAACTTATTACTGTCAACAGCTTAATAGTT
ACCCCTCACTTGGGGAGGGGCAAGTGGGGATCAAGACAGAACCTGGCT

D121 - SEQ ID NO:114

CCAGGCACCCCTGCTTTGTCTCCAGGGAAAGAGCCACCCCTCTCTGCAGGGCCAGTCAGAGTGTAGCAGCAGCTACTTAC
GTACCAAGCAGAAACCTGGCTCCAGGGCAGCTCAGGACTCTCACCATCAGCAGACTGGAGGCTGAAGATTITGCAGTGTATTACTGTCA
AGCTCACCTCGGACGTTGCCAAGGGACCAAGGGAAATCAAACGAACACTGTGGCT

B2 - SEQ ID NO:115

CCAGACTCCCTGGCTGTCTCTGGCGAGAGGGCCACCATCAACTGCAAAGTCCAGGCCAAGTGTCTTACACTTCCAACAATAA
GAACTACTTAGCTTGGTACCCAGCAGAAACCAGGCCAGCCTCTTAAGTTGCTCATTTACTGGGCATCACCACCCGGAAATCCGGGGTCC
CTGACCCGATTTCAGTGGCAGGGGGCTGGGACAGATTTCACCTCTCACCATCAGCAGGCCCTGCAAGGCTGAAGATGTGGCAGTTATAC
TGTCAAGCAATATTATGATTGATTCGTACACTTTGCCAGGGACCAAGCTGGAGATCAAACGAACACTGTGGCT

FIG. 5A

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATASE AND THEIR
PARTICIPATION IN AUTOIMMUNE DISEASE
INVENTORS NAME: Henrik Ditzel et al.
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D14 - SEQ ID NO:116

CGAGGCACCCCTGTCAATTGTCTCCAGGGGAAGGGCACCCCTCTGCAGGGCCAGTCAGGTAGCAGCAGCTACCTAGCCTG
GTATCAGCAGAGACCTGGCCAGGCCAGGCTCCAGGCTCATCTATGGTGCATCCAGGCACCGGCATCCAGACAGATTCACTG
GAAGTGGATCTGGGACAGATTCAAGTTCACTTCACTTCAACCATTCAGCAGTCAGCTGAAGATACTGGACATATTACTGTCAACAAATATGAT
AATGTCCTGACACTTGGCCAGGGACAGGGTGGAGATCAAACGAACACTGGGCT

D5 - SEQ ID NO:117

CGAGGCACCCCTGTCTTGTCTCCAGGGGAAGGGCACCCCTCTGCAGGGCCAGTCAGAGTGTAGCAGCAGCTACTTAGCCTG
GTACCAAGCAGAAACCTGGCCAGGCCAGGCTCCAGGCTCATCTATGGTGCATCCAGGCACCTGGCATCCAGACAGGGTCACTG
GCAGTGGGTCTGGGACAGACTTCACCTCTCACCATTCAGCAGACTGGAGCTGAAGATTTGCAGTGTATTACTGTCAAGCAGTATGGGT
ACCT CACCCCTCTTCGGCCAAGGGACACGGACTGGAGATTAAACGAACACTGTGGCT

A7 - SEQ ID NO:118

CGAGGCACCCCTGTCTTGTCTCCAGGGGAAGAGTCACCTCTCTGCAGGGCCAGTCAGAGTGTAGCAGCAGCTACTTAGCCTG
GTACCAAGCAGAAACCTGGCCAGGCCAGGCTCCAGGCTCATCTATGGTGCATCCAGGCACCTGGCATCCAGACAGGGTCACTG
GCAGTGGGTCTGGGACAGACTTCACCTCTCACCATTCAGCAGACTGGAGCTGAAGAGACTTGCAGTTTATTACTGTCAAGCAGTATGGGT
AGCTCACCTCGGACGTTGGCCAAGGGACCAAGGTGGAAATCAAACGAACACTGTGGCT

FIG. 5A Cont'd

TITLE: AUTOANT DIES TO GLUCOSE-6-PHOSPHAT SOMERASE AND THEIR
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HEAVY CHAIN NUCLEOTIDE SEQUENCE OF ANTI-GPI ANTIBODIES

A4-H - SEQ ID NO:116

GAGGCGTGGTCCAGCCTGGGAGGTCCCTGAAACTCTCCTGTGCAAGCCCTGGATTACACATTCACTAGTCATGGCTCCGCACTGGGTC
CGCCAAGCTCCAGGCAAGGGGGCTGGAGTGGGACTTTGTCGTTGATGGAAAGTAATAAATCTTATAAGAATCCGTGAAGG
GCCGATTACCATCTCAAGGACAATTCTAAGAACACACTGTATCTGCAAATGAAACAGCCTGAGAAATTGACGACACGGCTGTCTAT
TACTGTGGGATTTCCTGGGGAAACTACCGCTTTAACCTGGCTACCCGGAAACCCCTGGTACCCGTCTCCTCA

D2-H - SEQ ID NO:117

GGCGTGGTCCAAGGCATGGGAGGTCCCTAAGAGACTCTCCTGTGTAAGCCTTCAGTAGTCATACCATGCACTGGGTC
CCAGGCCTCCAGGCAAGGGGGCTGGAGTGGGACTTTCTATGATGGAAAGTAATAAATCTATGCAACTCCGTGAAGGGC
CGATTCAACCATCTCCAGAGACAATTCCAAGAACACCGCTGTATCTGCAATTGAGCAGGCCTAAGACCTGGGACACGGCTGTCTATTAA
TGTACGAATTCCGGAGGTGGGAGCTACCGCTTTGACTACTGGGCCAGGGAAACCCCTGGTACCCGTCTCCTCA

D121-H - SEQ ID NO:118

GGGGAGGGCGTGGTCCAGGCTCTGGGAGACTTTCTGTGCAAGCCTCTGGATTACCTTCAGTTCTATACTTTCCACTGG
GTCCGGCCAGGGCTCCAGGCAAGGGGGCTGGAGTGGGACTTTCTATGATGGAAACAAGAAATACTACGGCAGACTCCGTGA
AGGGCCGATTCAACCATCTCCAGAGACAATTCCAAGAACACTCTATCTGCAAATGAAACAGCCTGAGAGTGGAGAACACGGCT
TATTACTGTGCGATTCCATAGTGGGAAACTACCGCTTTAACCTGGGCCAGGGAAACCCCTGGTACCCGTCTCCTC

FIG. 5B

TITLE: AUTOANT DIES TO GLUCOSE-6-PHOSPHAT SOMERASE AND THEIR
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B2-H - SEQ ID NO:119

GGGGCTGAGGGTGAAGCCGGACCTCCGTGAGGATCTTCAGGGCATCTGGAAACACCTTCACTGGGCCACCATATTCACTG
GGTCCGCCAGGGCCCTGGACAAGGCGCTTCAGTGGATGGGAAGAATCAACCCGACTGGCGGGCGTTAGTCTCGCACAGAGITTC
CAGGACACAGAGTCAGCCTGACCAGGGACAGGGTCACTGAGGGCTTACAGTCTTCTTGGAACTGAACGGGGCTCACGGAGGACACGGCCT
TATATTCTGTGGAGGGCCCCGATTAAACATGATGGGGCAAGGGGACAGTGGTCACCGTCTCCTCA

D14-H - SEQ ID NO:120

GGGGGAGGGCTTGGTACAGGCCTGGGGGCTCTGGAAACCTCTCTGTGCAACGTTACAGCTATGCGATGAACT
GGTCCGCCAGGGCTCCAGGGAAAGGGGCTTGAAGTGGGTCTCAGTATTAGTGGAAAGCACATTCTACGGCAAGACTCCGTG
AAGGGCCGGTTTCAACCATCTCCAGAGACAATTCCAAGAACACGGCGTTCTGGAAATGAAACAGCCAGAGGCCAAGACCGGG
TTTATTACTGTGGAAAGATCTGTGAGTGGTCAACTACTACGGATGGACGTTGGGGCCAAGGGACCCAGGTACCCGTCACCGTC
TCTCA

D5-H - SEQ ID NO:121

GGCCCAAGGATTGGTGAAGGCCATCACAGACCCCTATCCCTCACCTGCACTGCTCTCCAGGGCTTAAAGGTGATAGTTACCTCTGG
AGCTGGGGTCCGTCAAGCCCGTAGGGGAAGGGACTGGGATAGGGCTATCTACGGCAAGGGACTACCAATTACAACCGTGT
TCGGGAGTCAGTCAGTATGTCCAGGAGTCACTGAGGAGTGTGACCCCTGGGGCAAGGGAAATAGTGGTCAACGTCTCA
GTCTATTACTGTGGAGAGACAAGGGTCCGAATACTCCTACTTGAACCCCTGGGGCAAGGGAAATAGTGGTCAACGTCTCA

FIG. 5B Cont'd

TITLE: AUTOANTI-DIES TO GLUCOSE-6-PHOSPHATE SOMERASE AND THEIR
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INVENTORS NAME: Henrik Ditzel et al.
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A7-H - SEQ ID NO:122

GGGCTGAGGTGAAGGAAGCCTGGTCTGGCTCAGGGCTTCTGGAGGCACATTCA
GAGATCTGGTGGCTGGACAGGGCCCTGGACAAAGGGCTTGAGTGGATGGAGGGAT
ACGCACAGAAGTCCAGGGCAAGAGTCACGGATTACCGCGGACGATTCCAC
TGAGATCTGGGACACGGGACTACATGGACGTGGCTATTACTGGTGGTACT
AGATCTACTACTACCTACATGGACGTCTGGGCAAAGGGACCCACGGTCA
CCGCTCAGCCAA

FIG. 5B Cont'd

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHAT^E ISOMERASE AND THEIR
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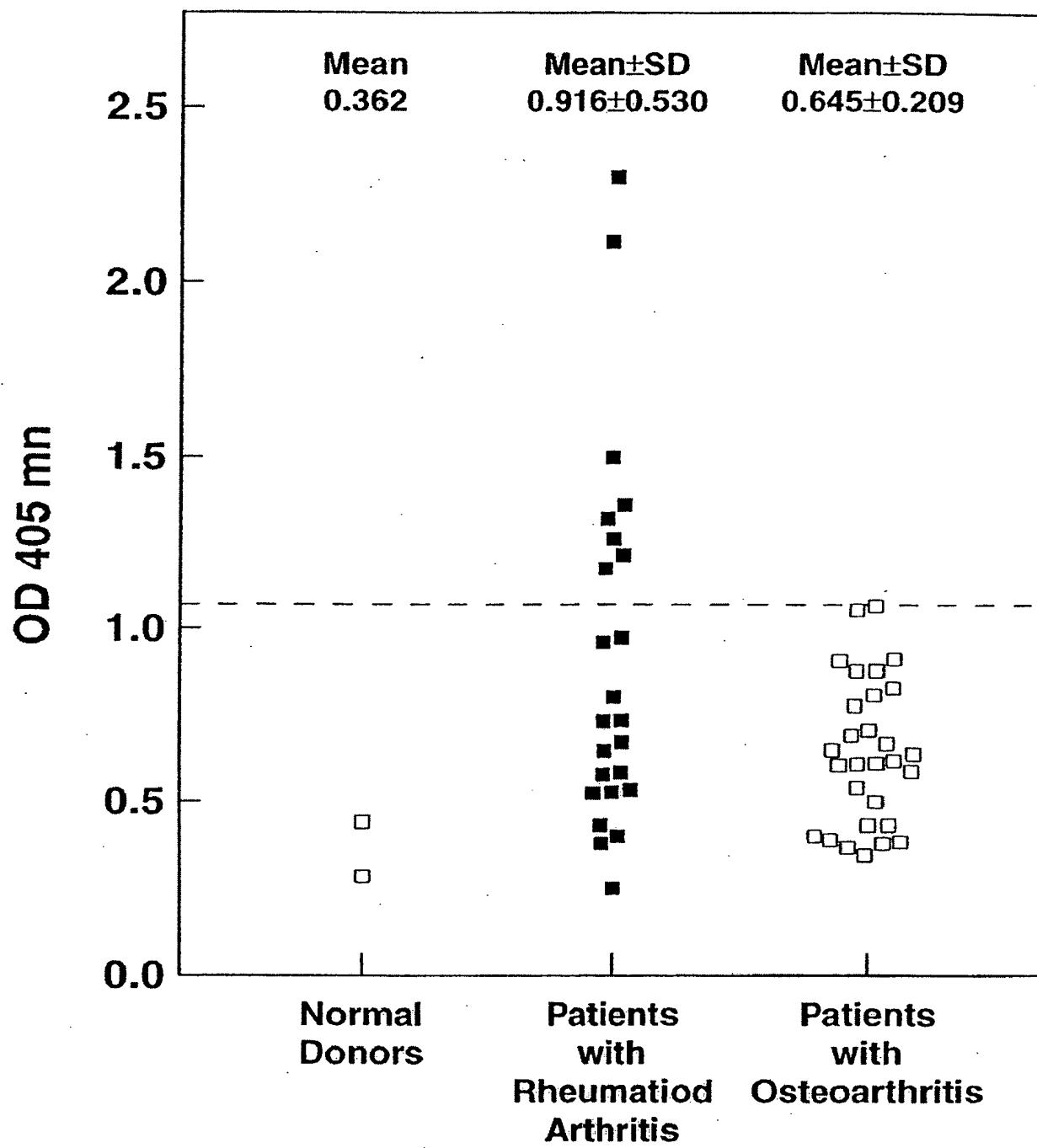


FIG. 6

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATASE SOMERASE AND THEIR
PARTICIPATION IN AUTOIMMUNE DISEASE
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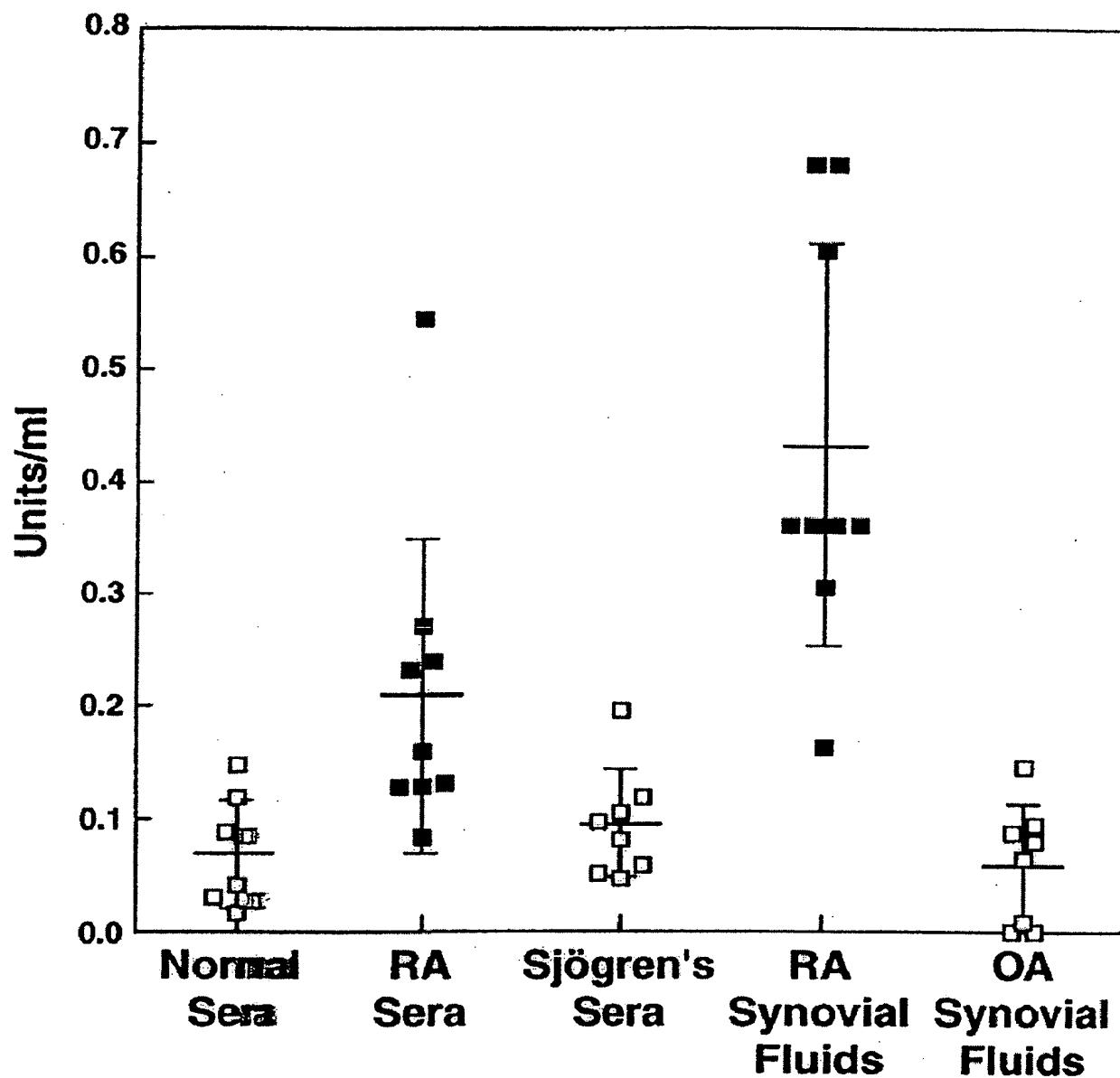


FIG. 7

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATASE AND THEIR
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INVENTORS NAME: Henrik Ditzel et al.
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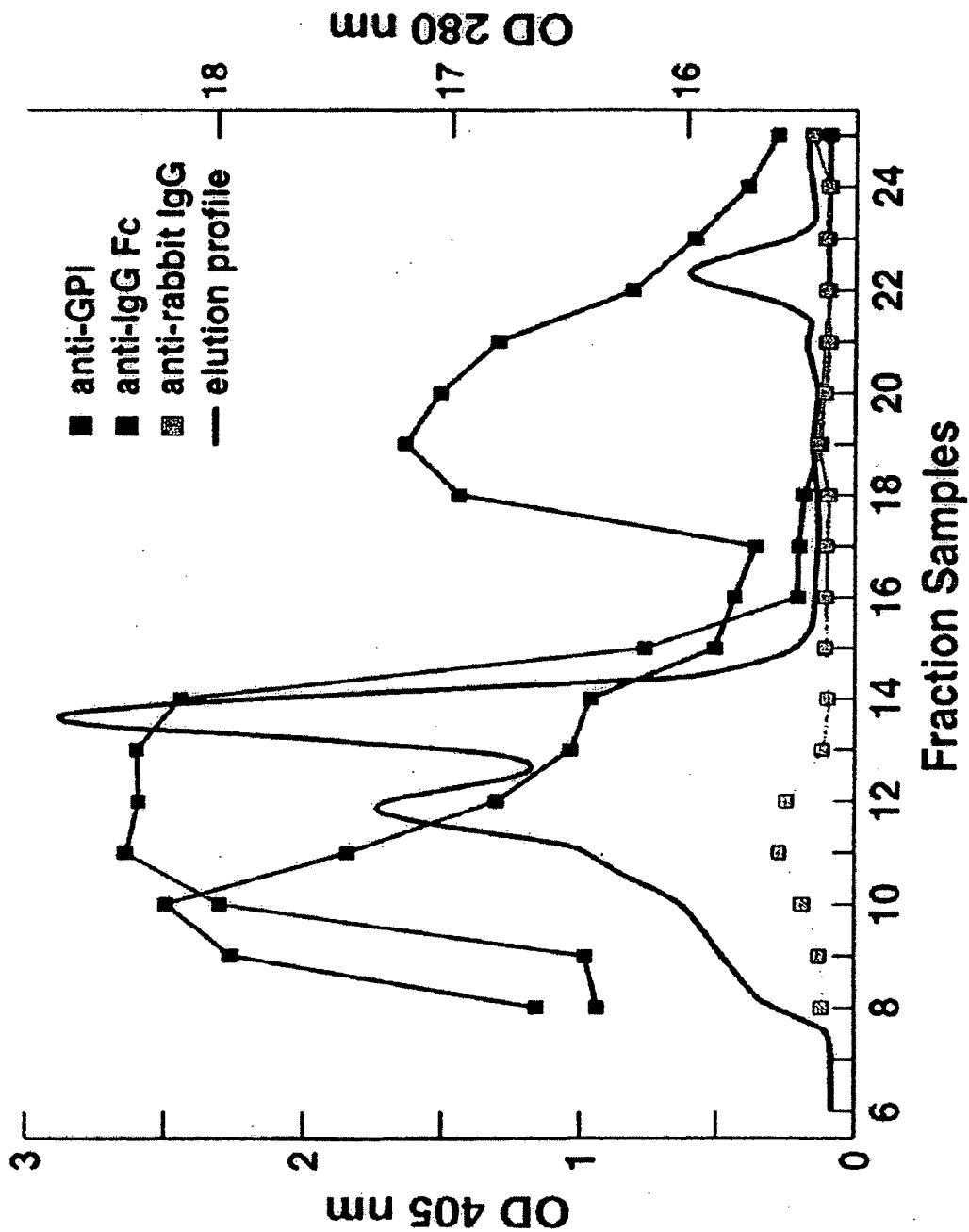


FIG. 8A

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR
PARTICIPATION IN AUTOIMMUNE DISEASE
INVENTORS NAME: Henrik Ditzel et al.
SERIAL NO.: 09/828,708

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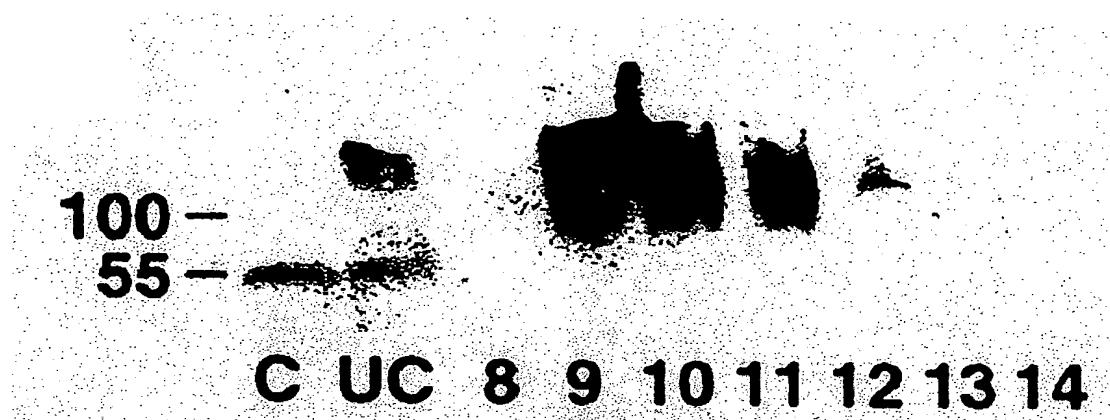


FIG. 8B

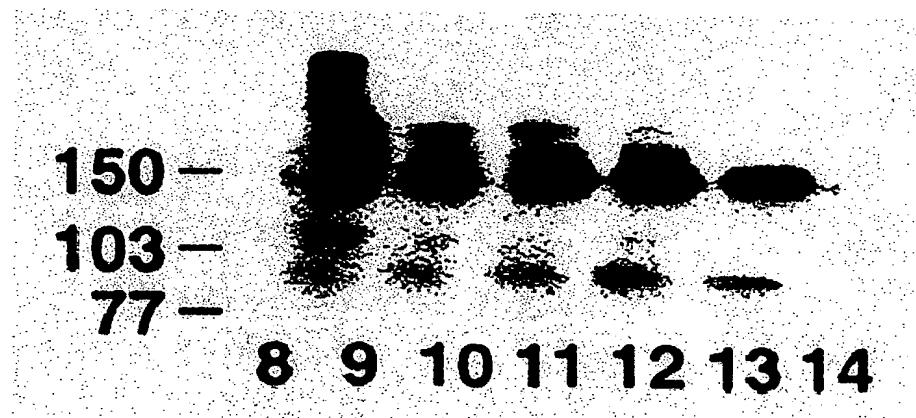


FIG. 8C

TITLE: AUTOANTIBODIES TO GLUCOSE-6-PHOSPHATE ISOMERASE AND THEIR
PARTICIPATION IN AUTOIMMUNE DISEASE
INVENTORS NAME: Henrik Ditzel et al.
SERIAL NO.: 09/828,708

21/21

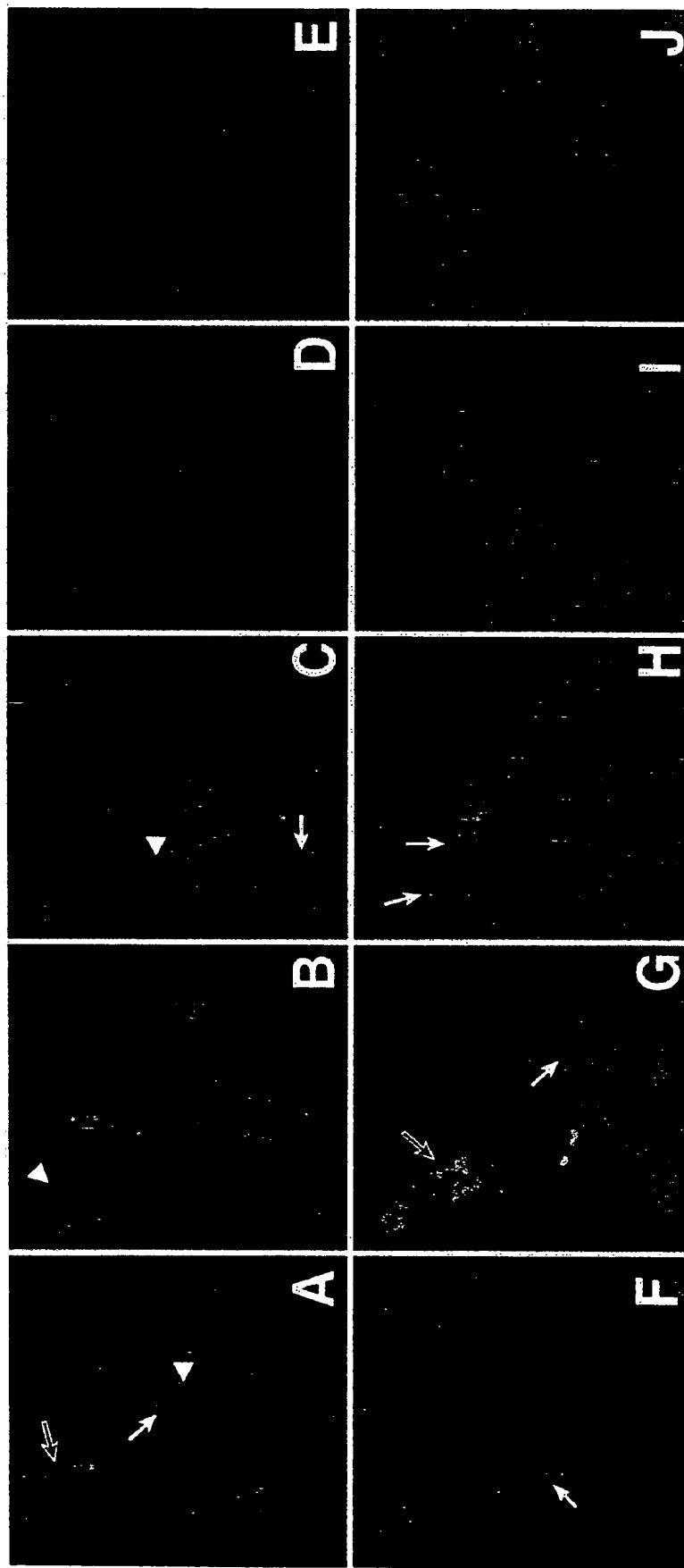


FIG. 9